

In the specification

Please substitute the following amended paragraph in place of the paragraph beginning on page 3, line 3:

According to the object of the invention, a method for preventing damage to an anti-reflective structure during removing an overlying photoresist layer includes the following steps. First, a nitrogen-free silicon oxide layer having a refractive index of 1.4~1.7 and an extinction coefficient of 0~0.5 is in-situ formed overlying a nitrogen-free dielectric anti-reflective structure to serve as a protective layer. Next, a patterned photoresist layer is formed overlying the nitrogen-free silicon oxide layer. Finally, the patterned ~~first~~ photoresist layer is removed by oxygen containing plasma.

Please substitute the following amended paragraph in place of the paragraph beginning on page 3, line 20:

The present invention also provides a semiconductor device for preventing damage to an anti-reflective structure during removing an overlying photoresist layer. The device includes a nitrogen-free dielectric anti-reflective structure and a nitrogen-free silicon oxide layer. The nitrogen-free dielectric anti-reflective structure is disposed overlying a substrate. The nitrogen-free silicon oxide layer, which has a refractive index of 1.4~1.7 and an extinction coefficient of 0~0.5, is disposed overlying the nitrogen-free anti-reflective structure layer to serve as a protective layer.

Please substitute the following amended paragraph in place of the paragraph beginning on page 7, line 7:

To the contrary, if the line width or line space is out of specification, the patterned photoresist layer 108a is removed for rework. In FIG. 1c, the patterned photoresist layer 108a having an undesirable feature pattern is stripped by oxygen containing plasma 110. FIG. 1d[[4]] shows the structure after the patterned photoresist layer 108a is completely removed. During stripping, the portion of underlying anti-reflective structure uncovered by the patterned photoresist layer 108a may be damaged. For example, incompletely oxidized anti-reflective materials may react with the oxygen containing plasma, altering its original optical properties such as refractive index and the extinction coefficient, making the anti-reflective structure fail.

In the invention, the nitrogen-free silicon oxide layer 106 overlying the ARL 104 is used as a protective layer to create a barrier preventing the oxygen atoms from the plasma 110 from reacting with the ARL 104. Accordingly, the undamaged underlying ARL 104 maintains its original refractive index and extinction coefficient, and thereby improves the lithography quality.

Please substitute the following amended paragraph in place of the paragraph beginning on page 8, line 22:

According to the invention, since the ARL can be protected from plasma damage by an overlying oxide layer, lithography quality can be increased by maintaining the optical properties of the ARL, thereby increasing the subsequent etching.